phenomin

EXCELLENCE IN MOUSE PHENOGENOMICS

Genotyping protocol

Project Ncam2

(PHENOMIN-ICS reference IR00006055 / P6055)

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The first version of this report was finalized the: 17 Nov 2016
The last update of this report was done the: 08 Dec 2016

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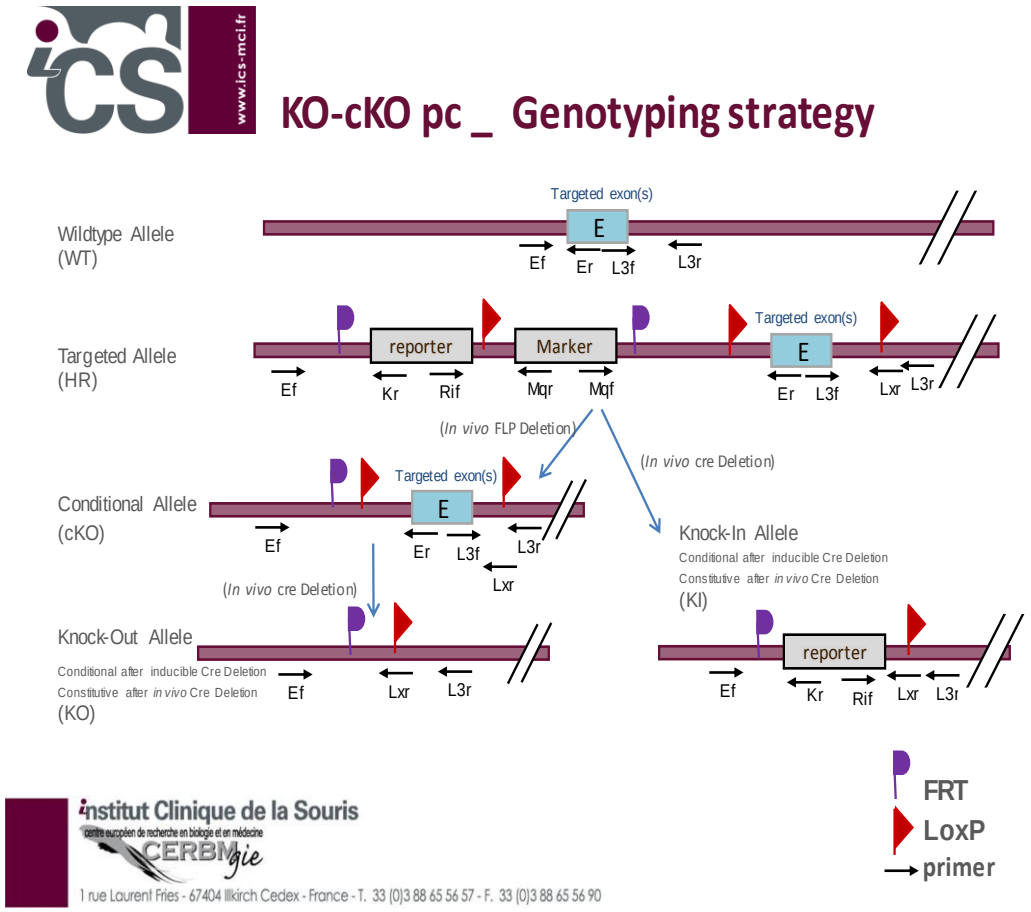
1. Genotyping protocol and data

This section describes the condition used at the Mouse Clinical Institute (ICS) to genotype your **Ncam2** Constitutive Knockout / Conditional Knockout (KO-cKO x Cre) project.

1.1. Genotyping strategy

The map below describes the position of the primers used for genotyping for each possible allele.



Sequence of primers used for genotyping:

Position	Primers	Sequence
Ef	9317	GGGGAAAGAACTTGGAAATGATAATTACTG
Er	9320	GTCAAGCAACCTTAAGGCAAACACATAG
Kr	3277	CTCCTACATAGTTGGCAGTGTTTGGG
L3f	9318	CCAAGTGTAAGGATGTCAGAGCCAACC
L3r	9319	CAACTGTCTCTTTCATTGTCAAAACGAAGAG
Lxr	3255	ACTGATGGCGAGCTCAGACCATAAC
Rif	5966	GCACATGGCTGAATATCGACGGT

PCR fragments expected size (bp):

Region analyzed	Primers used	Position on the primer *(see the map above)*	Targeted allele (HR)	conditional allele (cKO)	KI allele	WildType allele
5' part of the selection marker (with Betaine)	9317-3277	Ef / Kr	274	---	---	---
Presence of the distal loxP	9318-9319	L3f / L3r	385	385	---	408
Distal loxP specific PCR	9318-3255	L3f / Lxr	247	247	---	---
Excision of the selection marker (with Betaine)	9317-9320	Ef / Er	7464*	560	---	410
Cre total excision	5966-3255	Rif / Lxr	3255*	---	471	---

*: this PCR product will not be observed using our PCR genotyping conditions (see description below)
---: no Amplicon should be obtained

1.2. PCR protocol

This section describes the composition of the mix and cycling conditions used for genotyping.

Reagents:	Volume:
- FastStart PCR Master (Roche)	7.5µl
- DNA (50ng/µl)	1.5µl
- 5' primer (100 µM)	0.06µl
- 3' primer (100 µM)	0.06µl
- Sterile H_2O	up to 15 µl

Cycling conditions:

Temp	Time	#Cycles
95°C	4min	1
94°C	30s	
62°C	30s	34
72°C	1min	
72°C	7min	1
20°C	5min	1

NB: These PCR conditions have been optimized for high-throughput genotyping. Adaptation to small-scale may be required.

2. Cre and Flp genotyping method

You will find the genotyping protocol in the publication:

Highly-efficient, fluorescent, locus directed cre and FlpO deleter mice on a pure C57BL/6N genetic background.
Birling MC, Dierich A, Jacquot S, Hérault Y, Pavlovic G.
Genesis. 2012 Jun;50(6):482-9. doi: 10.1002/dvg.20826. Epub 2012 Mar 20.